

**COLLISION AVOIDANCE USING GPS DEVICE
AND TRAIN PROXIMITY DETECTOR**

ABSTRACT OF THE DISCLOSURE

5 A processor (12) located on a vehicle processes GPS coordinates input thereto to provide an area of protection around the vehicle. Railroad grade crossing data (82, 84) stored in a data base (30) is read therefrom to ascertain whether a grade crossing is within the area of protection. If so, heading data (86) stored in association with the grade crossing data (82, 84) is compared with the heading of the vehicle to determine if the vehicle is on a road that intersects the grade crossing. If so, a first level alert is provided to the vehicle operator. If, in addition, a train is in the vicinity of the crossing, a second level alert is provided to the operator of the vehicle.